Claims:

    1.   A power supply control method in a portable
communication device provided with a plurality of controllers
including a main controller and a sub controller for controlling
external communication, comprising the steps of:

5   a) checking whether the sub controller is performing
the external communication; and

            b) when the external communication has not been
performed for a predetermined time-out period, powering off
the sub controller.

10   2.   The power supply control method according to claim
1, wherein the external communication is radio communication
with a mobile communications system for location registration
of the portable communication device.

    3.   The power supply control method according to claim
15 1, wherein the external communication is wired communication
with an external information processing device through an
external connector.

    4.   The power supply control method according to claim
1, wherein

20   the step a) comprises the steps of:

a.1) sending an operation check request to the sub controller when an operation check timer is reset for the predetermined time-out period; and

a.2) determining whether an operation check response to

5   the operation check request is received from the sub controller,

and

the step b) comprises the steps of:

b.1) when the operation check response is not received from the sub controller within the predetermined time-out period,

10   powering off the sub controller; and

b.2) when the operation check response is received from the sub controller within the predetermined time-out period, keeping the sub controller powered on.

5.   The power supply control method according to claim

15   4, further comprising the steps of:

implementing at least an external interface task and timer handler in the main controller; and

implementing at least an external communication monitoring task in the sub controller,

20   wherein the external interface task sends the operation check request when the timer handler starts the operation check timer and, when the operation check response is not received from the sub controller within the predetermined time-out period, powers off the sub controller,

25   wherein the external communication monitoring task

sends the operation check response back to the external interface task when the external communication is being performed.

6.   A power supply control system in a portable communication device provided with a plurality of controllers including a main controller and a sub controller for controlling external communication, comprising:

operation check means for checking whether the sub controller is performing the external communication; and

power control means controlling power supply of the sub controller such that the sub controller is powered off when the external communication has not been performed for a predetermined time-out period.

7.   The power supply control system according to claim 6, wherein

the operation check means sends an operation check request to the sub controller when an operation check timer is reset for the predetermined time-out period, and determines whether an operation check response to the operation check request is received from the sub controller, and

the power control means powers off the sub controller when the operation check response is not received from the sub controller within the predetermined time-out period, and keeping the sub controller powered on when the operation check response is received from the sub controller within the

predetermined time-out period.

    8.   The power supply control system according to claim 7, wherein the sub controller sends the operation check response back to the main controller when the external communication

5   is being performed.

    9.   A portable communication device comprising:

    a radio communication section for communicating with a base station of a mobile communications system;

    a main CPU for controlling an entire operation of

10   the portable communication device;

    a sub CPU for controlling external communication;

    a dual port memory connected to the main CPU at one port and connected to the sub CPU at the other port, for transferring messages between the main CPU and the sub CPU,

15   wherein the main CPU implements:

    operation check means for checking whether the sub controller is performing the external communication; and

    power control means controlling power supply of the sub controller such that the sub controller is powered off when

20   the external communication has not been performed for a predetermined time-out period,

    wherein the sub controller implements:

    response means for sending the operation check response back to the main controller when the external communication

is being performed.

10.   A computer program instructing a computer to
implement a power supply control method in a portable
communication device provided with a plurality of controllers
5   including a main controller and a sub controller for controlling
external communication, the program comprising the steps of:
        a) checking whether the sub controller is performing
the external communication; and
        b) when the external communication has not been
10   performed for a predetermined time-out period, powering off
the sub controller.

11.   The computer program according to claim 10, wherein
        the step a) comprises the steps of:
        a.1) sending an operation check request to the sub
15   controller when an operation check timer is reset for the
predetermined time-out period; and
        a.2) determining whether an operation check response to
the operation check request is received from the sub controller,
and
20   the step b) comprises the steps of:
        b.1) when the operation check response is not received
from the sub controller within the predetermined time-out period,
powering off the sub controller; and
        b.2) when the operation check response is received from

the sub controller within the predetermined time-out period,

keeping the sub controller powered on.

    12.   The computer program according to claim 11, further

comprising the steps of:

5   implementing at least an external interface task

and timer handler in the main controller; and

               implementing at least an external

communication monitoring task in the sub controller,

               wherein the external interface task sends the

10   operation check request when the timer handler starts the

operation check timer and, when the operation check response

is not received from the sub controller within the predetermined

time-out period, powers off the sub controller,

               wherein the external communication monitoring task

15   sends the operation check response back to the external interface

task when the external communication is being performed.